# Louisiana Asthma Management Prevention Program 2012-2013

Health Care Provider Toolkit



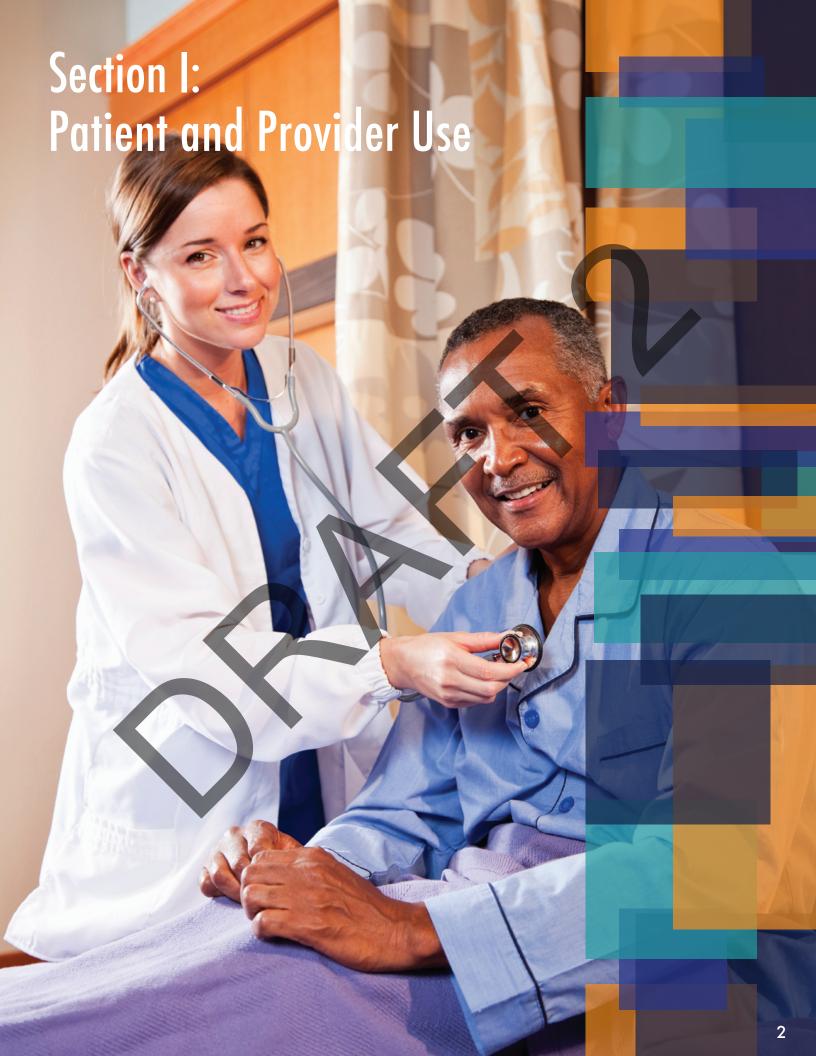






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### Asthma Action Plan

Patient:	DOB:	Date:	<ul> <li>The colors of the traffic light will</li> <li>help you use your asthma medicine.</li> </ul>
Emergency Contact:	Phone:		
Healthcare Provider:	Signatu	ıre:	Zone! Use controller medicine.
Providers Phone (Day/N	Night):/		Caution Zone: Add
Patient/Student Signatu	re: Parent:		quick-relief medicine.
For Exercise: 20 minut	tes hetore $\square$ 1 $\square$	terol (ProAir, Proventil, Ventolin) lbuterol (Xopenex)	RED means Danger Zone! Get help from a doctor.
GREEN = Go Zone	Use CONTROLLER Medica	ations EVERY DAY and Avo	id Asthma Triggers
You have ALL of these:	Controller Medication	How Much to Take	How Often
-Breathing is good			
-No cough or wheeze			
-Can work and play			_
-Sleep through the night			
	Rinse mouth or	brush teeth after using Cor	
If peak flow meter us	ed: Peak flow greater thanabove 8		
YELLOW = CAUTION ZONE	Getting Worse! Add QUICK	RELIEVER Medication	
You have ANY of these:	Continue DAILY Green Zon		d ADD QUICK RELIEVER:
-Cough	Albuterol (ProAir, Proven		Levalbuterol (Xopenex)
-Mild wheeze	2 puffs 4 puffs	1 nebulizer treatme	nt
-Tight chest	If better in 20 minutes, contin	nue Quick-Reliever every 4-	6 hours for 1-2 days and:
-Waking at night due to asthma			·
-First sign of cold	If not improving:		
-Can do some, but not all, usual activities	Take oral steroid:		fordays
-Exposure to a	Call your provider	r at 24 hours	48 hours
known trigger  This is not	where you should be everyday. Take ac	tion to get your asthma unde	er control
	f peak flow meter used:to	(50% to 80% of personal l	best)
RED = DANGER ZONE	Take these medicines and GE	ET HELP NOW	
Your asthma is bad:	Use QUICK RELIEVER		
-Medicine is not helping within 10-20 minutes	2 puffs 4 puffs	6 puffs	1 nebulizer treatment
-Breathing is hard and fast	If not better in 20 minutes, re provider's office - dial 911 if		ing to the hospital or
-Nose opens wide	My Asthma Triggers: Weath	er Food Gras	SS Cockroach Particles
-Ribs show	=	ollution Animals Mole	<b>=</b>
-Trouble walking	Colds Smoke Tree P	Pollen Othe	:r
-Trouble talking	If peak flow meter used: Peak flow below	v(below 50% of perso	onal best)

### **STATE OF LOUISIANA**

### **MEDICATION ORDER**

### TO BE COMPLETED BY LA, TX, AR, OR MS LICENSED PRESCRIBER (In most instances, medications will be administered by unlicensed personnel.)

PART	1: PARENT OR LEGAL GUARDIAN TO COMPLETE.	
Studer	nt's Name	Birthdate
School	I	Grade
Parent	t or Legal Guardian Name (print):	
Parent	t or Legal Guardian Signature:	Date:
(Please	e note: A parental/legal guardian consent form must also be filled o	ut. Obtain from the school nurse.)
	2: LICENSED PRESCRIBER TO COMPLETE.  Relevant Diagnosis(es):	·
2.	Student's General Health Status:	
3.	Medication: Dosage (amo	
4.	Strength of medication: Dosage (amo	unt to be given):
	Check Route:   By mouth   By inhalation   Other	
	Frequency Time of each	dose
	School medication orders shall be limited to medication that caschool hours. Special circumstances must be approved by sc	
5.	Duration of medication order: ☐ Until end of school term ☐	Other
6.	Desired Effect:	
7.	Possible side-effects of medication:	
8.	Any contraindications for administering medication:	
9.	Other medications being taken by student when not at school:	
10	. Next visit is:	
Prescrit	ber's Name (Printed) Address F	Phone and Fax Numbers
Prescri	ber's Signature Credential (i.e., MD, NP, DI	DS) Date
medicati	edication order must be written on a separate order form. Any future changes in dire- ions orders. Orders sent by fax are acceptable. Legibility may require mailing origina	ctions for medication ordered require new al to the school. Orders to discontinue also must be
written.	3: LICENSED PRESCRIBER TO COMPLETE AS APPROPRIATE	<u>.</u>
	Inhalants / Emergency Drugs	
	Release Form for Students to be Allowed to Carry Medi	cation on His/Her Person
Use th	is space only for students who will self-administer medication such a	as asthma inhaler.
	Is the student a candidate for self-administration training?	☐ Yes ☐ No
2.	Has this student been adequately instructed by you or your staff a administration of medication to the degree that he/she may self-ac	nd demonstrated competence in self- lminister his/her medication at school,
	provided that the school nurse has determined it is safe and appro-	
	school setting? ☐ Yes ☐ No	
3.	If training has not occurred, may the school nurse conduct a training	ng program? □Yes □ No
	Licensed Provider's Signature	Date

### PEFR Chart for Asthma Action Plan

Peak Expiratory Flow Rate: Zone ranges rounded to the nearest five liters per minute.

Height in Inches or Feet	Height in Centimeters	Predicted or Personal Best	Green Zone (80-100%)	Yellow Zone (50-80%)	Red Zone (<50%)
		100	80 to 100	50 to 80	Below 50
		120	100 to 120	60 to 100	Below 60
39" or 3'3"	100	140	110 to 140	70 to 110	Below 70
41" or 3'5"	105	160	130 to 160	80 to 130	Below 80
43" or 3'7"	110	180	145 to 180	90 to 145	Below 90
45" or 3'9"	115	200	160 to 200	100 to 160	Below 100
47" or 3'11"	120	220	175 to 220	110 to 175	Below 110
49" or 4'1"	125	240	190 to 240	120 to 190	Below 120
51" or 4'3"	130	260	210 to 260	130 to 210	Below 130
53" or 4'5"	135	280	225 to 280	140 to225	Below 140
55" or 4'7"	140	300	240 to 300	150 to 240	Below 150
56" or 4'8"		320	255 to 320	160 to 255	Below 160
57' or 4'9''	145	330	265 to 330	165 to 260	Below 165
58" or 4'10"		340	270 to 340	170 to 270	Below 170
59" or 4'11"	150	360	290 to 360	180 to 290	Below 180
60" or 5'		380	300 to 380	190 to 300	Below 190
61 or 5'1"	155	390	310 to 390	195 to 310	Below 195
62 or 5'2"		400	320 to 400	200 to 320	Below 200
63 or 5°3"	160	420	335 to 420	210 to 335	Below 210
64 or 5'4"		440	350 to 440	220 to 350	Below 220
65 or 5'5"	165	450	360 to 450	225 to 360	Below 225
66 or 5'6"		460	370 to 460	230 to 370	Below 230
67 or 5'7"	170	480	385 to 480	240 to 385	Below 240
68 or 5'8"		500	400 to 500	250 to400	Below 250
69 or 5'9"	175	520	415 to 520	260 to 415	Below 260
70 or 5'10"		540	430 to 540	270 to 430	Below 270
71 or 5'11"	180	560	450 to 560	280 to 450	Below 280

### Asthma Questionnaire

Directions: Caregivers, please answer the Asthma Questionnaire and provide to your doctor at each doctor's visit.

### Hospital/Emergency Room

Have you/your child ever been to an emergency room for Asthma?	$\square$ Yes $\square$ No
Have you/your child been to an emergency room for asthma in the past six months?	$\square$ Yes $\square$ No
Have you/your child ever spent the night in a hospital because of asthma?	$\square$ Yes $\square$ No
Have you/your child spent the night in a hospital because of asthma in the past year?	$\square$ Yes $\square$ No
Have you/your child ever been in an Intensive Care Unit for asthma?	☐ Yes ☐ No
Have you/your child ever needed a breathing tube (been intubated) because of asthma?	Yes $\square$ No
Medications	
Have you/your child taken steroids by mouth (Prednisone, Otapred, Medrol) for asthma?	$\square$ Yes $\square$ No
Have you/your child taken steroids by mouth in the past year?	$\square$ Yes $\square$ No
Have you/your child taken steroids by mouth in the past six months?	$\square$ Yes $\square$ No
Have you/your child taken steroids by mouth two times or more in the past year?	$\square$ Yes $\square$ No
Tobacco Use	
Do you smoke?	$\square$ Yes $\square$ No
Does anyone in your home smoke?	$\square$ Yes $\square$ No
Is there anywhere else you/your child are often around people who are smoking?	☐ Yes ☐ No
Preventive Measures	
Did you/your child get the regular flu vaccine this year?	$\square$ Yes $\square$ No
Do you/your child have a written Asthma Action Plan?	$\square$ Yes $\square$ No
Triggers	
Please check anything that is a trigger for you/ your child's asthma or allergies:	
Animals	eles

### **Environmental History for Pediatric Asthma Patient**

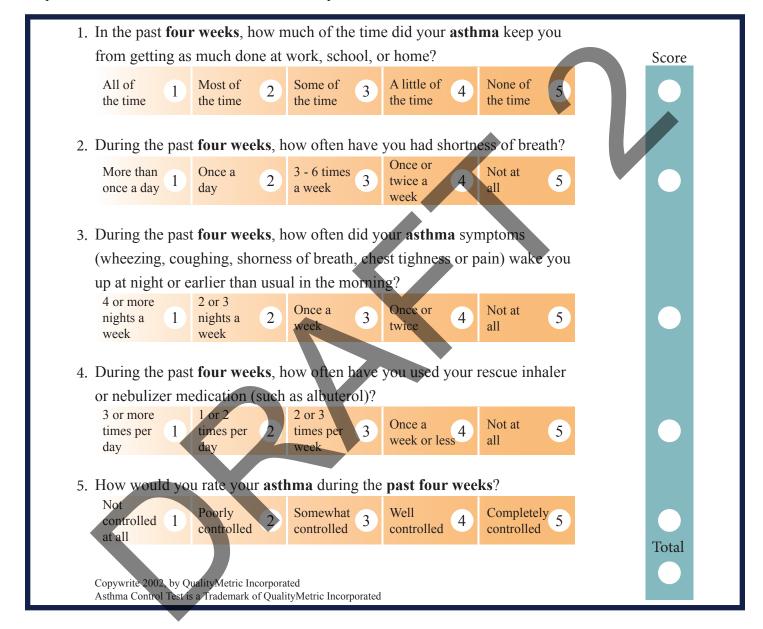
Specify that questions related to the child's home also apply to other indoor environments where the child spends time, including school, daycare, car, school bus, work and recreational facilities.

Is your child's asthma worse at night?	$\square$ Yes $\square$ No $\square$ Not sure
Is your child's asthma worse at specific locations?	☐ Yes ☐ No ☐ Not sure
If so, where?	
Is your child's asthma worse during a particular season?	☐ Yes ☐ No ☐ Not sure
If so, which one?	
Is your child's asthma worse with a particular change in climate?	Yes No Not sure
If so, which?	
Can you identify any specific trigger(s) that makes your child's asthma worse?	☐ Yes ☐ No ☐ Not sure
If so, what?	
Have you noticed whether dust exposure makes your child's asthma worse?	☐ Yes ☐ No ☐ Not sure
Does your child sleep with stuffed animals?	☐ Yes ☐ No ☐ Not sure
Is there wall-to-wall carpet in your child's bedroom?	☐ Yes ☐ No ☐ Not sure
Have you used any means for dust mite control?	☐ Yes ☐ No ☐ Not sure
If so, which ones?	
Do you have any furry pets?	☐ Yes ☐ No ☐ Not sure
Do you see evidence of rats or mice in your home weekly?	☐ Yes ☐ No ☐ Not sure
Do you see cockroaches in your home daily?	☐ Yes ☐ No ☐ Not sure
Do any family members, caregivers or friends smoke?	☐ Yes ☐ No ☐ Not sure
Does this person(s) have an interest or desire to quit?	☐ Yes ☐ No ☐ Not sure
Does your child/teenager smoke?	☐ Yes ☐ No ☐ Not sure
Do you see or smell mold/mildew in your home?	☐ Yes ☐ No ☐ Not sure
Is there evidence of water damage in your home?	☐ Yes ☐ No ☐ Not sure
Do you use a humidifier or swamp cooler?	☐ Yes ☐ No ☐ Not sure
Have you had new carpets, paint, floor refinishing, or other changes at	☐ Yes ☐ No ☐ Not sure
your house in the past year?	
Does your child or another family member have a hobby that uses	☐ Yes ☐ No ☐ Not sure
materials that are toxic or give off fumes?	
Has outdoor air pollution ever made your child's asthma worse?	☐ Yes ☐ No ☐ Not sure
Does your child limit outdoor activities during a Code Orange or Code Red	☐ Yes ☐ No ☐ Not sure
air quality alert for ozone or particle pollution?	
Do you use a wood burning fireplace or stove?	☐ Yes ☐ No ☐ Not sure
Do you use unvented appliances such as a gas stove for heating your home?	☐ Yes ☐ No ☐ Not sure
Does your child have contact with other irritants?	☐ Yes ☐ No ☐ Not sure
(e.g., perfumes, cleaning agents, or sprays)	

### Take the Asthma Action Control Test (ACT)

For Patients 12 Years and Older. Know your score. Share results with your doctor.

- Step 1: Write the number of each answer in the score box provided.
- Step 2: Add up the score boxes for your total.
- Step 3: Take the test to the doctor to talk about your score.



If your score is 19 or less, your asthma may not be controlled as well as it could be. Talk to your doctor.

#### FOR PHYSCIANS: The ACT is:

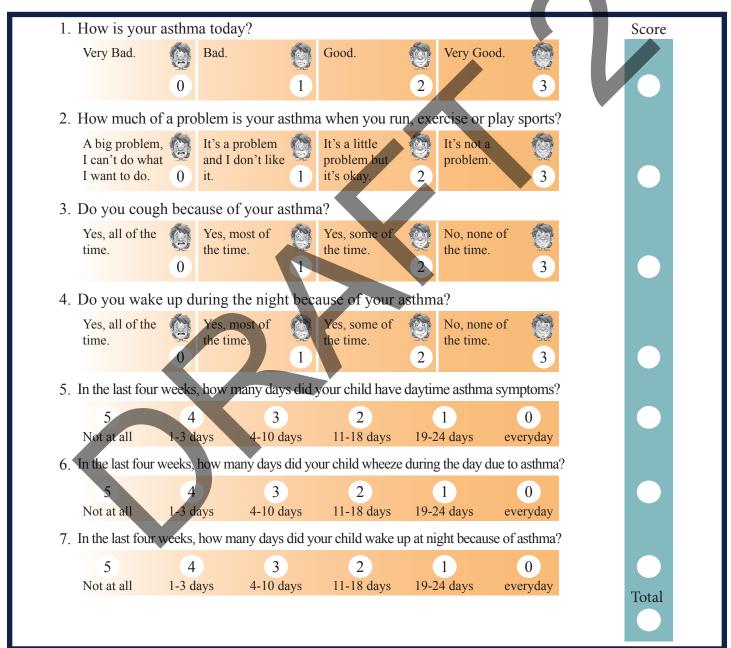
- A simple 5-question tool that is self administered by the patient
- Recognised by the National Institutes of Health
- Clinically validated by specialist assesment and spirometry<sup>1</sup>

Reference 1. Nathan RA et al. J Allergy Clin Immunal. 2004; 113:59-65

### Childhood Asthma Action Control Test

#### For Children 4 to 11 Years Old.

- Step 1: Let your child respond to the first **four questions (1 to 4).** If your child needs help reading and/or understanding the questions, you may help, but let your child select the reponse. Complete the remaining **three questions (5 to 7)** on your own and without letting your child's responses influence your answers.
- Step 2: Write the number of each answer in the score box provided.
- Step 3: Add up the score boxes for your total.
- Step 4: Take the test to the doctor to talk about your child's total score.



If your child's score is **19 or less**, it may be a sign that your child's asthma is not controlled as well as it could be. Bring this test to a doctor to talk about the results.

## Test for Respiratory and Asthma Control in Kids (TRACK)

### For Kids Under 5 Years of Age

#### What is TRACK?

TRACK is a simple five-question test that can help assess respiratory and asthma control in patients between the age of 12 months and five years. It addresses both the risk and impairment domains outlined in the NHLBI/NAEPP-3 Asthma Guidelines. TRACK is designed to be used by caregivers and interpreted by medical professionals.

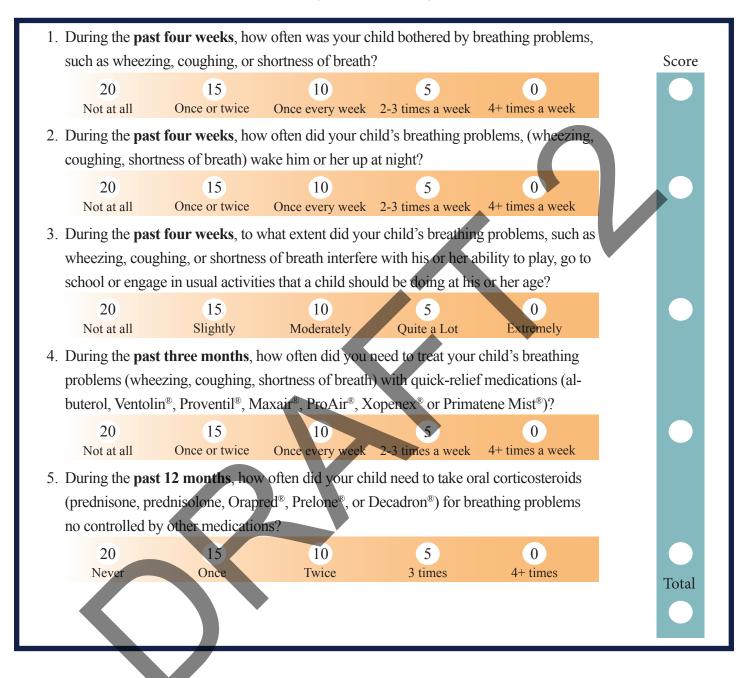
#### Who Should use TRACK?

- The simple test can help determine if your child's breathing problems are not under control. The test was designed for children who
- Are younger than five years of age AND
- Have a history of two or more episodes of wheezing, shortness of breath, or cough lasting more than 24 hours AND
- Have been previously prescribed bronchodilator medicine, also known as quick-relief medications (eg. Albuterol, Ventolin, Proventil, Maxair, ProAir, or Xopenex) for respiratory or asthma control, this is NOT a diagnostic test.

#### How to Take TRACK

- Step 1: Write the number of your answer in the score box provided to the right of each question.
- Step 2: Add up the numbers in the individual score boxes to obtain your child's total score.
- Step 3: Take the test to your child's health care provider to talk about your child's total TRACK score.

## Test for Respiratory and Asthma Control in Kids (TRACK)





### **About Asthma**

Asthma is a serious chronic lung disease and cannot be cured. However, by taking medicine and making changes to your environment it can be controlled. The basic cause of asthma is not yet known, but it tends to run in families. It is common in children or adults with allergies and if not treated correctly, can result in death. Currently, 12 percent of children in Louisiana have asthma, and it is the top reason children miss school.

### What Causes Asthma Episodes?

Triggers such as allergies, colds, tobacco smoke or exercise can cause asthma episodes. Eighty percent of people who have asthma have allergies to airborne substances such as:

- · Tree Pollen
- Grass
- Weeds
- Mold
- · Animal dander
- Dust mites
- Cockroach particles
- Tobacco smoke

### The Main Signs and Symptoms of Asthma Are:

Asthma episodes rarely come on suddenly. Often, there are clues or early warning signs that an episode may occur. Some early warning signs may be runny nose, coughing, shortness of breath, inability to sleep at night, inability to exercise, prolonged respiratory infections or decrease of lung capacity. The Main Signs and Symptoms of asthma are:

- Coughing
- Shortness of breath
- Wheezing
- Tightness of chest
- Waking up at night with symptoms
- Coughing with exercise
- Coughing more than two weeks or wheezing after viral infections

### What Happens During an Asthma Attack?

### During an Asthma Episode, a Person has Difficulty Breathing Because:

- The lining of the airways become swollen
- The muscles around the airways tighten, making the airways smaller
- Thick mucus forms, blocking small airways

### Warning Signs of an Asthma Attack

- Breathing very quickly
- · Becoming hunched over
- Severe wheezing
- Nostrils open wider with each breath
- Hard time walking, talking or eating
- The skin between the ribs is pulled tight
- Lips, skin or fingernails are blue
- Quick relief medicine is not working after 20 minutes

#### How to Avoid an Asthma Attack

- Refer to your asthma action plan, developed by your doctor
- Take quick relief medications as needed or prescribed by your doctor
- Asthma episodes may be prevented by avoiding asthma triggers and taking a controller medicine, if prescribed by your doctor
- If your child's asthma action plan includes a daily controller medicine, be sure to take it every day, even when your child doesn't feel sick.



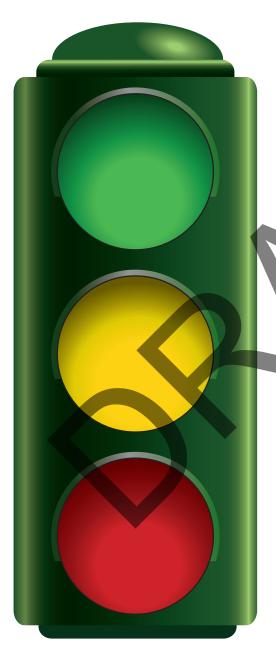
### Taking Control of Your Asthma

Good asthma control means the child is able to:

- Play and exercise when the child wants
- Sleep through the night without coughing or wheezing
- Avoid urgent visits to the doctors and no hospitalization because of asthma

#### The Asthma Action Plan- What Does It Mean?

How the parent, physician and teacher can monitor your child's asthma.



### GREEN Asthma Zone

Child is Under Control

This zone means the child has no signs of asthma, which includes no coughing, no wheezing, no fast breathing and the child is playing with no problems.

### YELLOW Asthma Zone:

Follow Treatment in Asthma Action Plan
This zone means the child is having signs such as coughing,
wheezing, cold symptoms or coughing at night.

### RED Asthma Zone:

SEEK EMERGENCY HELP!

This zone means medicine has not helped within 10-20 minutes, and the child is experiencing fast breathing, trouble walking and talking, lips and/or fingernails blue.

### Spray Inhaler with a Tube Type Spacer or Holding Chamber



Take off cap and Make sure opening is clean. Shake inhaler five seconds.





Step 5

Start to take a slow deep breath. If you hear a whistle, breathe slower, but keep taking a deep breath. Do not breathe through

your nose.



Step 2

Put inhaler into spacer.



Step 6

Take the spacer out of your mouth and hold your breath. Count to 10 slowly.



Step 3

Breathe out all the air in your lungs.



Step 7

Breathe out slowly, like cooling soup on a spoon.



Step 4

Put spacer in your mouth and close lips tightly around the mouthpiece. Spray one puff of medicine into the spacer.

#### Best to use inhalers with a spacer.

More medicine will get into the lungs and less will get on your tongue and throat.

Use more than one puff of medicine? Wait at least 30 seconds between puffs.

### Using a Spacer with a Facemask



Take off inhaler cap and make sure opening is clean. Shake inhaler five seconds.

Step 1



Put inhaler into open end of spacer.

Step 2



Put mask over the nose AND mouth. Press against the face gently so no air or medicine escapes.

Step 3



Spray one puff of medicine and hold the mask in place.

Step 4



Breathe in and out six times.

Step 5

#### Best to use inhalers with a spacer.

More medicine will get into the lungs and less will get on your tongue and throat.

Use more than one puff of medicine? Wait at least 30 seconds between puffs.

### Dry Powder Inhaler (DPI): Twishaler



Open Inhaler: Hold inhaler straight up with pink base on bottom.

Step 1



Inhale Dose: Hold base and twist white cap to the left. The dose counter counts down by one as you twist off the white cap.

Step 2



Turn head and breathe out.





Close lips tight around the mouthpiece and take a deep, fast breath. Hold the inhaler horizontal.

Step 4



Take inhaler out of your mouth and hold breath for 10 seconds. Replace the cap on the inhaler and twist to the right until it clicks. It must be fully closed to load the next dose. Be sure the arrow on the cap is lined up with the dose counter on pink base.

Step 5

Repeat each step everytime you take a dose.

### Dry Powder Inhaler (DPI): Flexhaler

First time use: Prime inhaler two times. Do the loading steps 1, 2 and 3 below.

Load the Dose



Hold straight up and twist off white cap.

Inhale the Dose



Turn face away and breathe out. Do not blow into the inhaler.

Step 1





Twist brown base to the right.



Put your lips around the mouthpiece. Breathe in deeply and forcefully. Hold inhaler straight up or sideways. Do not tip or you will lose dose.



Step 2

Twist brown base to the left until you hear a click.



Step 3

Hold your breath a few seconds. Blow out gently.



Step 3



Inhaler is empty when the number "0" shows in the middle of the red background. Rinse mouth after use.

It is best to use inhalers with a spacer. More medicine will get into the lungs and less will get on your tongue and throat. If you don't use a spacer, here are two ways to use your inhaler.





#### **Spray Inhaler with Open Mouth**

- 1. Take off cap and make sure opening is clean. Shake five seconds.
- 2. Breathe out all the air in your lungs.
- 3. Hold the inhaler two finger widths away.
- 4. As you start to breathe in through your mouth, push down on the top of the inhaler and keep taking a slow, deep breath.
- 5. Hold breath for 10 seconds.
- 6. Breathe slowly through pursed lips (like cooling soup on a spoon).



#### Spray Inhaler in Mouth

- 1. Take off cap and make sure opening is clean. Shake five seconds.
- 2. Breathe out all the air in your lungs.
- 3. Put inhaler in your mouth and close lips tightly around the opening of the inhaler.
- 4. As you start to breathe in through your mouth, push down on the top of the inhaler and keep taking a slow deep breath.
- 5. Hold breath for 10 seconds.
- 6. Breathe slowly through pursed lips (like cooling soup on a spoon).

Use more than one puff of medicine? Wait at least 30 seconds between puffs.

### Nebulizer Medicine



Getting Ready



Put the nebulizer compressor (machine) on a hard surface and plug machine into outlet.

Step 1



Unscrew top of nebulizer.

Step 2



Put a dose of medicine in the nebulizer cup.

Step 3



Put top of nebulizer back on and turn until tight.

Step 4



Put mouthpiece onto nebulizer with valve facing down (outlet away from eyes).

Step 5



Press the tubing firmly to the bottom of the nebulizer.

Step 6



Attach opposite end of tubing to machine's outlet port.

01

### Nebulizer Medicine

Using the Nebulizer



Turn compressor (machine) on.

Step 8



Look at mouthpiece to see if there is a steady mist.

Step 9



Put mouthpiece between teeth and top of tongue. Breathe in through mouth.

Step 10



Step 11

Use a mask if you cannot breathe through your mouth. Blowing medicine in the face is not a good way to get medicine into the lungs.



After medicine is gone, turn compressor off.



Clean nebulizer parts with hot soapy water, or vinegar and hot water.

Step 13

Tips: Do not wash tubing. Change when it looks wet or dirty. Change filter on machine when it turns gray or looks dirty. Rinse mouth after using inhaled steroid in nebulizer.



### Dry Powder Inhaler (DPI): Diskus



Getting Ready



Step 1

Open: Keep diskus level in one hand. Put thumb of your other hand on grip and push away until the mouthpiece appears and snaps into place.



Step 2

Click: Slide lever away from you as far as it will go until you hear or feel a "click". Hold the diskus level and do not tip, or you will lose the dose.



Step 3

Breathe Out: Turn face away and breathe out. Do not blow into the diskus.



Inhale: Put the mouthpiece between your lips. Breathe in quickly and deeply through the diskus. Hold your breath for 10 seconds.



Step 5

Close the diskus, then blow out gently.



Step 6

Rinse mouth with water, gargle and spit. Do not swallow.

Take only one breath each time.

The counter on the side shows how many doses are left: One month = 60 doses. 14 days = 28 doses

#### Peak Flow Meter

Get Ready: Get a pencil and your peak flow chart.



Slide the marker down as far as it will go. This sets the meter to zero.

Step 1



Step 2

Stand up and take a deep breath with your mouth open. Hold the meter. Keep your fingers away from the numbers.



Step 3

Close your lips around the tube. Do not put your tongue in the hole. Blow one time as fast and hard as you can.

The marker will go up and stay up. Do not touch the marker. Find the number where the marker stopped.



Step 4

Step 5

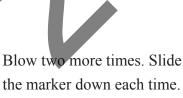


Step 6



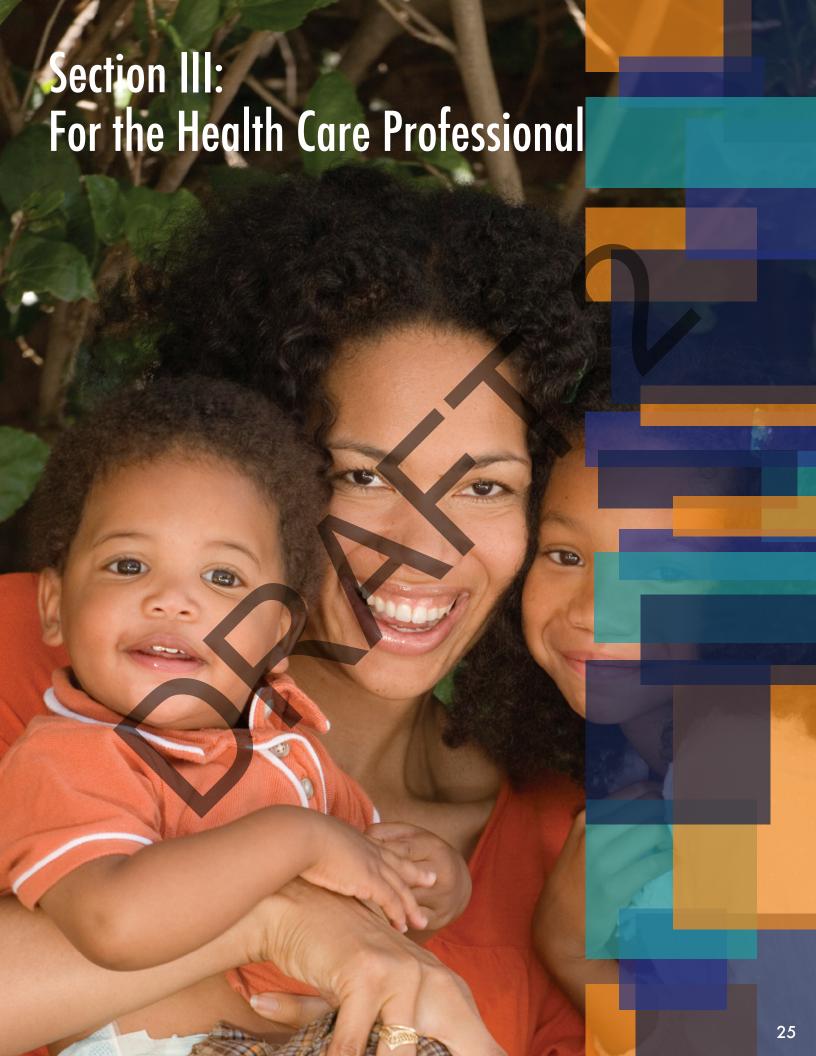
Step 7

Write down the number.



the marker down each time.
Write the number down each time.

Keep the highest number on a chart. Do this for one to two weeks. Show your doctor, nurse or asthma educator.



### Asthma Quality of Care Measures

### Outpatients

In 2007, the National Committee for Quality Assurance (NCQA) and the Physician Consortium for Performance Improvement (PCPI) created clinical measures for the treatment and management of asthma, based on the NAEPP EPR-3 Guidelines. These are the indicators for the ambulatory care setting; each is based on a one-year period and is for any patient with asthma between ages five and 50.

Measure #1: Percentage of patients with a diagnosis of asthma who were evaluated at least once for asthma control (comprising asthma impairment and risk).

Documentation of impairment-> daytime symptoms AND nighttime awakenings AND interference with normal activities AND short-acting beta-agonist use for symptom control AS WELLAS documentation of asthma risk -> the number of asthma exacerbations requiring oral corticosteroids in the past 12 months.

Measure #2: Percentage of patients with a diagnosis of asthma who were queried about tobacco use and exposure to secondhand smoke in their home environments at least once.

**Measure #3**: Percentage of patients with a diagnosis of asthma who were identified as tobacco users or as exposed to ETS at home who received tobacco cessation intervention.

Providing cessation interventions to a pediatric patient's primary caregiver is counted even if the primary caregiver is not the smoker in the home.

Measure #4: Percentage of patients with a diagnosis of persistent asthma who were prescribed long-term control medication.

Will be determined as those prescribed inhaled corticosteroids (ICS), those prescribed non-ICS, and total prescribed any controller. Documentation of a patient's reason for not prescribing a controller also "counts".

**Measure #5**: Percentage of patients identified as having persistent asthma whose asthma medication ratio was  $\geq 0.5$ 

<u>Controller Medications</u> = Medication Ratio

A higher ratio means that short-acting bronchodilators are not being overused and is associated with better asthma outcomes as well as reduced emergency room visits and hospitalizations.

### Asthma Quality of Care Measures

### Hospitalized or ED Patients

In 2007, the National Committee for Quality Assurance (NCQA) and the Physician Consortium for Performance Improvement (PCPI) created clinical measures for the treatment and management of asthma, based on the NAEPP EPR-3 Guidelines. These are the indicators for the hospital or emergency department setting; each is based on a one year period and is for any patient with asthma between the ages of five and 50 years.

**Measure** #6: Percentage of patients with an emergency department visit or an inpatient admission for an asthma exacerbation who were evaluated for asthma risk.

asthma risk -> the number of asthma exacerbations requiring oral corticosteroids in the past 12 months. Patients with  $\geq 2$  two exacerbations requiring steroids in the past 12 months are categorized as persistent and recommended to be prescribed a long-term controller.

**Measure** #7: Percentage of patients with an emergency department (ED) visit or an inpatient admission for an asthma exacerbation who are discharged from the emergency department OR inpatient setting with an asthma discharge plan.

Clinicians, before patients discharge from the ED or hospital, should provide patients with necessary medications and education on how to use them, referral for a follow-up appointment, and instruction in an ED asthma discharge plan for recognizing and managing relapse of the exacerbation or recurrence of airflow obstruction.

## Summary of the NAEPP's EPR-3: Guidelines for the Diagnosis and Management of Asthma

#### Consider the Diagnosis of Asthma if:

- Patient has recurrent episodes of cough, wheeze, shortness of breath, or chest tightness.
- Symptoms occur or worsen at night, awakening the patient.
- Symptoms occur or worsen in the presence of factors known to precipitate asthma.
- Alternative diagnoses have been considered such as GERD (a common co-morbidity), airway anomaly, foreign body, cystic fibrosis, vocal cord dysfunction, TB, or COPD. If diagnosis is in doubt, consider consulting an asthma specialist.



#### Confirm the Diagnosis of Asthma if:

• Spirometry demonstrates obstruction and reversibility by an increase in FEV1 of >12% after bronchodilator (in all adults and children five years of age or older).



#### Assess Asthma Severity: Any of the following indicate persistent asthma

- Daytime symptoms >2 days per week **OR**
- Awakens at night from asthma  $\geq 2$  times per month (age 0-4 years:  $\geq 1$  time per month) **OR**
- Limitation of activities, despite pretreatment for EIB OR
- Short-acting beta2-agonist (SABA) use for symptom control > 2 days per week (not prevention of EIB) OR
- 2 or more bursts oral corticosteroids in 1 year (age 0-4 years: ≥2 bursts oral corticosteroids in 6 months\*) OR
- >years old: FEV1 less than 80% predicted OR FEV1/FVC ratio less than predicted normal range for age (see below)

\*NOTE: For children age 0-4 years who had four or more episodes of wheezing during the previous year lasting >1 day, check risk factors for persistent asthma. Risk factors include either (1) one of the following: parental history of asthma, a physician diagnosis of atopic dermatitis, or evidence of sensitization to aeroallergens, or (2) two of the following: evidence of sensitization to foods, > 4% peripheral blood eosinophilia, or wheezing apart from colds.



### Treatment for Persistent Asthma: Daily inhaled corticosteroids (step 2 or higher), follow the stepwise spproach. Assess response within 2-6 weeks.

#### Is asthma well controlled?

- 1. Daytime symptoms  $\leq 2$  days per week AND
- 2. Awakens at night from asthma  $\leq 1$  time per month ( $\geq 12$  years old:  $\leq 2$  times per month) AND
- 3. No limitation of activities AND
- 4. SABA use for symptom control (not prevention of EIB)  $\leq$  2 days per week **AND**
- 5.  $\leq 1$  burst oral corticosteroids per year
- 6. FEV1  $\geq$  80% predicted
- 7. FEV<sub>1</sub>/FVC

 $5-19 \text{ yrs} \ge 85\%$   $20-39 \text{ yrs} \ge 80\%$   $40-59 \text{ yrs} \ge 75\%$  $60-80 \text{ yrs} \ge 70\%$ 



#### YES

Consider step down if well controlled for three consecutive months. Reassess every 3-6 months.



#### NO

Step up therapy. Reassess in 2-6 weeks. Continue to step up until well controlled.

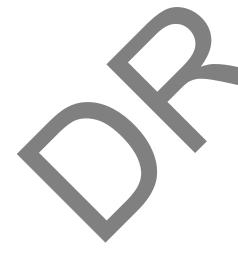


Indications for asthma specialist consultation include: Asthma is unresponsive to therapy; asthma is not well controlled within 3-6 months of treatment; life-threatening asthma exacerbation; hospitalization for asthma; required >2 bursts oral corticosteroids in one year; requires higher level step care (see Stepwise Approach, page 32); immunotherapy is being considered.

## Summary of the NAEPP's EPR-3: Guidelines for the Diagnosis and Management of Asthma

### Quick Tips for All Patients with Asthma:

- Planned Asthma Visits: Every 1-6 months
- Environmental Control: Identify and avoid exposures such as tobacco smoke, pollens, molds, animal dander, cockroaches, and dust mites (Allergy testing recommended for anyone with persistent asthma who is exposed to perennial indoor allergens)
- Flu Vaccine: Recommend annually
- Spirometry (Not During Exacerbation): At diagnosis and at least every 1-2 years starting at age five years
- Asthma Control: Use tools such as ACQ®, ACT<sup>TM</sup> or ATAQ© to assess asthma control
- Asthma Education: Review correct inhaled medication device technique at every visit
- Asthma Action Plan: At diagnosis; review and update at each visit
- SABA (e.g., inhaled albuterol): 1) for quick relief every 4-6 hours as needed (see step 1), 2) pretreat with 2 puffs for exercise-induced bronchospasm (EIB) 5 minutes before exercise
- Inhaled Corticosteroids (ICS): Preferred therapy for all patients with persistent asthma
- Oral Corticosteroids: Consider burst for acute exacerbation
- Valved Holding Chamber (VHC) or Spacer: Recommend for use with all metered dose inhalers (MDI)
- Mask: Recommend for use with VHCs or spacers and/or nebulizer for age <5 years and anyone unable to use correct mouthpiece technique



Produced by the California Asthma Public Health Initiative (CAPHI) in association with CAPHI's Improving Asthma Control collaborative. Summarized from the NAEPP EPR-3: www.nhlbi.nih.gov/guidelines/asthma. Adapted from Colorado Clinical Guidelines Collaborative (www.coloradoguidelines.org/guidelines/asthma. asp). This summary of NAEPP's guidelines is designed to assist the clinician in the diagnosis and management of asthma and is not intended to replace the clinician's judgment or establish a protocol for all patients with a particular condition. Additional copies of the summary and other asthma resources available at www. betterasthmacare.org. Permission to reprint granted if unaltered. Revised: September 2008

### Summary of the NAEPP's EPR-3: Stepwise Approach for Managing Asthma in Children and Adults

Intermittent Asthma (Step 1)

Persistent Asthma: Daily Medication (Steps 2-6)

Classifying asthma severity in patients not currently taking long-term control medication is a guide for selection of initial step therapy. Regularly monitoring the level of asthma control is a guide for adjusting therapy.

Step up as indicated and/or address possible poor adherence to medication. Reassess in 2 to 6 weeks.

Step down if well controlled for 3 months and reassess in 3-6 months.

(All long-acting beta-agonists (LABAs) and combination agents containing LABAs have a black box warning.)

Step 1

All Ages

**Preferred:** SABA every

4-6 hours prn.

If used more than 2 days per week (other than for EIB) consider inadequate control and the need to step up treatment

Step 2

Age 0-4 yrs

Preferred: Low dose ICS

Alternative: Cromolyn or Montelukast Consider consulting an asthma specialist

Age 5-11 yrs

Preferred: Low dose ICS

Alternative: Cromolyn, LTRA Nedocromil or Theophylline + Consider immunotherapy if patient has

Age > 12 yrs

allergic asthma

**Preferred:** Low dose ICS

Alternative: Cromolyn, LTRA Nedocromil or Theophylline + Consider immunotherapy if patient has allergic asthma

Age 0-4 yrs

Step 3

Preferred: Medium dose ICS + Consult an asthma specialist

Age 5-11 yrs

Preferred: either low dose ICS + either LABA, LTRA or Theophylline OR medium dose ICS + Consider immunotherapy if patient has allergic asthma + Consider consulting an asthma specialist

Age >12yrs

Preferred: Low dose ICS + LABA OR Medium dose ICS

**Alternative:** Low dose ICS + either LTRA, Zileuton, or Theophylline + consider immunotherapy if patient has allergic asthma + Consider consulting an asthma specialist

### Summary of the NAEPP's EPR-3: Stepwise Approach for Managing Asthma in Children and Adults

Persistent Asthma: Daily Medication (Steps 2-6)

Step up as indicated and/or address possible poor adherence to medication. Reassess in 2 to 6 weeks.

Step down if well controlled for 3 months and reassess in 3-6 months.

(All long-acting beta-agonists (LABAs) and combination agents containing LABAs have a black box warning.)

#### Step 4

Age 0-4 yrs

**Preferred:** Medium dose

ICS + either LABA or

Montelukast + Consult an

asthma specialist

Age 5-11 yrs

**Preferred:** Medium dose

ICS + LABA

**Alternative:** Medium dose

ICS + either LTRA or The-

ophylline + Consider immu-

notherapy if patient has al-

lergic asthma + Consult an

asthma specialist

Age >12yrs

Preferred: Medium dose

ICS + LABA

Alternative: Medium dose

ICS + either LTRA or The-

ophylline or Zileuton +

Consider immunotherapy if

patient has allergic asthma +

Consult an asthma specialist

### Step 5

Age 0-4 yrs

Preferred: High dose ICS

+ either LABA or Montelu-

kast + Consult an asthma

specialist

Age 5-11 yrs

Preferred: High dose ICS +

LABA

High dose **Alternative:** 

ICS + either LTRA or The-

ophylline + Consult an asth-

ma specialist

Age > 12 yrs

Preferred: High dose ICS

+ LABA + Consider Omalizumab for patients who

have allergies + Consult an

asthma specialist

Step 6 Age 0-4 yrs

Preferred: High dose ICS +

either LABA or Montelu-

kast + Oral systemic corti-

costeroid + Consult with an

asthma specialist

Age 5-11 yrs

**Preferred:** High dose ICS +

LABA + Oral

systemic corticosteroid

**Alternative:** High dose ICS

+ LTRA or Theophylline

+ Oral systemic corticoste-

roid + Consult an asthma

specialist

Age >12yrs

Preferred: High dose ICS

+ LABA + Oral systemic

corticosteroid + Consider

Omalizumab for patients

who have allergies + Con-

sult an asthma specialist

Produced by the California Asthma Public Health Initiative (CAPHI) in association with CAPHI's Improving Asthma Control collaborative. Summarized from the NAEPP EPR-3: www.nhlbi.nih.gov/ guidelines/asthma. Adapted from Colorado Clinical Guidelines Collaborative (www.coloradoguidelines.org/guidelines/asthma. asp). This summary of NAEPP's guidelines is designed to assist the clinician in the diagnosis and management of asthma and is not intended to replace the clinician's judgment or establish a protocol for all patients with a particular condition. Additional copies of the summary and other asthma resources available at www.betterasthmacare.org. Permission to reprint granted if unaltered. Revised: September 2008

## Estimated Comparative Daily Dosages for Inhaled Corticosteroids

### Low Daily Dose

Dung	Child 0-4	Child 5-11	Child ≥ 12 Years Old
Drug	Years Old	Years Old	and Adults
Beclomethasone HFA			
40 or 80 mcg/puff	NA	80-160 mcg	80-240 mcg
Budesonide DPI			
90, 180, or 200 mcg/inhalation	NA	180-400 mcg	180-600 mcg
<b>Budesonide Inhaled</b>			
Inhalation suspension for nebulization	0.25-0.5 mg	0.5 mg	NA
Flunisolide			
250 mcg/puff	NA	500-750 mcg	500-1,000 mcg
Flunisolide HFA			
80 mcg/puff	NA	160 mcg	320 mcg
Fluticasone HFA/MDI			
44, 110, or 220 mcg/puff	176 mcg	88-176 mcg	88-264 mcg
Fluticasone DPI			
50, 100, or 250 mcg/inhalation	NA	100-200 mcg	100-300 mcg
Mometasone DPI			
200 mcg/inhalation	NA	NA	200 mcg
Triamcinolone acetonide			
75 mcg/puff	NA	300-600 mcg	300-750 mcg

Key: DPI, dry power inhaler; HFA, hydrofluoroalkane; MDI, metered-dose inhaler; NA, not available (either not approved, no data available)

## Estimated Comparative Daily Dosages for Inhaled Corticosteroids

### Medium Daily Dose

Dung	Child 0-4	Child 5-11	Child ≥ 12 Years Old
Drug	Years Old	Years Old	and Adults
Beclomethasone HFA			
40 or 80 mcg/puff	NA	>160-320 mcg	>240-480 mcg
Budesonide DPI			
90, 180, or 200 mcg/inhalation	NA	>400-800 mcg	>600-1,200 mcg
<b>Budesonide Inhaled</b>			
Inhalation suspension for nebulization	>0.5-1.0 mg	1.0 mg	NA
Flunisolide			<b>Y</b>
250 mcg/puff	NA	1,000-1,250 mcg	>1,000-2,000 mcg
Flunisolide HFA			
80 mcg/puff	NA	320 mcg	>320-640 mcg
Fluticasone HFA/MDI			
44, 110, or 220 mcg/puff	>176-352 mcg	>176-352 mcg	>264-440 mcg
Fluticasone DPI			
50, 100, or 250 mcg/inhalation	NA	>200-400 mcg	>300-500 mcg
Mometasone DPI			
200 mcg/inhalation	NA	NA	400 mcg
Triamcinolone acetonide			
75 mcg/puff	NA	>600-900 mcg	>750-1,500 mcg

Key: DPI, dry power inhaler; HFA, hydrofluoroalkane; MDI, metered-dose inhaler; NA, not available (either not approved, no data available)

## Estimated Comparative Daily Dosages for Inhaled Corticosteroids

### High Daily Dose

Dung	Child 0-4	Child 5-11	Child ≥ 12 Years Old
Drug	Years Old	Years Old	and Adults
Beclomethasone HFA			
40 or 80 mcg/puff	NA	>320 mcg	>480 mcg
Budesonide DPI			
90, 180, or 200 mcg/inhalation	NA	>800 mcg	>1,200 mcg
<b>Budesonide Inhaled</b>			
Inhalation suspension for nebulization	>1.0 mg	2.0 mg	NA
Flunisolide			
250 mcg/puff	NA	>1,250 mcg	>2,000 mcg
Flunisolide HFA			
80 mcg/puff	NA	640 mcg	>640 mcg
Fluticasone HFA/MDI			
44, 110, or 220 mcg/puff	>352 mcg	>352 mcg	>440 mcg
Fluticasone DPI			
50, 100, or 250 mcg/inhalation	NA	>400 mcg	>500 mcg
Mometasone DPI			
200 mcg/inhalation	NA	NA	400 mcg
Triamcinolone acetonide			
75 mcg/puff	NA	>900 mcg	>1,500 mcg

Key: DPI, dry power inhaler; HFA, hydrofluoroalkane; MDI, metered-dose inhaler; NA, not available (either not approved, no data available)

### Asthma and Tobacco Use

#### Louisiana Tobacco Quitline

Secondhand smoke can trigger asthma episodes and increase the severity of attacks. Secondhand smoke is also a risk factor for new cases of asthma in preschool age children who have not already exhibited asthma symptoms. Secondhand smoke is linked to other chronic respiratory illnesses, such as bronchitis and pneumonia. Quitting tobacco use can greatly reduce the severity of asthma attacks and overall improve the health of Louisianians living with asthma and caregivers who currently smoke.

Find out how you can quit using tobacco by receiving FREE telephone counseling from the Louisiana Tobacco Quitline at 1-800-QUIT-NOW. Quitting Tobacco is hard. Have you tried to quit several times and you are still hooked? Don't stop trying. You can quit!

### When you call the Louisiana Tobacco Quitline you will receive:

- One-on-one proactive telephone counseling with a Quit Coach.<sup>®</sup>
- A Quit Coach ® can provide proactive telephone counseling sessions to help you through the quitting process and through potential relapse phases.
- Referrals to local smoking cessation services in your community.
- A Quit Coach ® will provide you with information on local smoking cessation services in your community.

### Practical advice and tips to help you quit for good

- Quit Coaches ® know how to make quitting easier by providing support and practical tips.
- You'll get the help that fits your needs as a Quit Coach ® develops a quit plan to improve your chances of success and helps you find ways to change your daily activities that trigger smoking, as well as help you cope with your cravings and avoid weight gain.
- The Quitline really works! People who get help from the Quitline are twice as likely to quit for good.

Quitting is hard, but getting professional help will improve your chances of success. The Louisiana Tobacco Quitline becomes your partner, and your Quit Coach <sup>®</sup> is there to support you through tough times to avoid a relapse.

You may call to speak to a Quit Coach anytime seven days a week between 7 a.m. - 2 a.m. CST.



### Louisiana Tobacco-Free Healthcare Facilities

### Why is it important to have tobacco-free health care facilities in Louisiana?

Louisiana health care facilities are ideal role models of healthy environments within the community. The initiative for these facilities to be 100% tobacco-free campuses supports protecting patients, employees and visitors from any exposure to secondhand smoke. According to a recent U.S. Surgeon General Report, there is no safe level of exposure to tobacco smoke. Therefore, a 100% Tobacco-Free campus-wide policy is the healthiest option.

### What are the benefits of being a tobacco-free health care facility?

- This policy showcases the health care facility's role as a community leader in protecting the health of the public, and motivates others to do likewise.
- By encouraging employees to quit and preventing secondhand smoke exposure, the initiative reduces healthcare costs because of illnesses caused by tobacco use and exposure, and reduces expenses incurred by loss of productivity and absenteeism.
- By increasing the number of tobacco-free environments, the policy supports people in quitting the use of tobacco. Health care facilities are increasing and enhancing the cessation benefits and resources they offer to their employees to help them successfully quit.

### What can we do to support tobacco-free health care facilities?

The most important thing health care facilities can do to support this initiative is to show a commitment by implementing a 100% tobacco-free health care policy.

### What are the elements of a 100% tobacco-free health care policy?

- Consistency with state law, Louisiana Smoke-Free Air Act 815
- Tobacco use prohibited by all on premises, including parking lots, sidewalks, lawn areas and all facility-owned properties.

### How can our health care facility become tobacco-free?

Visit www.latobaccocontrol.com to download the Project H.E.A.L. Manual. The purpose of this manual is to provide technical assistance and guidance to health care facilities implementing 100% tobacco-free campuses.

### How can I get more information?

To get more information, please contact Brandi Bourgeois, Interim Program Manager, at 225-342-9307 or email Brandi.Bourgeois@la.gov.

### F.L.A.R.E Asthma Discharge Protocol

#### What is F.L.A.R.E.?

F.L.A.R.E. is an evidence-based asthma education discharge protocol that helps hospitals implement the patient education components of the National Institutes of Health (NIH) Guidelines for the Diagnosis and Management of Asthma. F.L.A.R.E. includes five key messages to help asthma patients better manage their disease:

- **F** Follow up with a primary doctor
- L Learn about asthma medicines
- A Asthma is a life-long disease
- **R** Respond to warning signs that asthma is getting worse
- **E** Emergency care may be needed if certain symptoms occur

#### F.L.A.R.E. Training

1-hour training for hospital staff on how to implement F.L.A.R.E. The training is available at no cost to Louisiana hospitals. The F.L.A.R.E. training will include:

- How F.L.A.R.E. helps hospitals meet the NIH Asthma Guidelines;
- How to successfully implement F.L.A.R.E. (taught by a Louisiana health care provider and/or respiratory specialist); and
- F.L.A.R.E. benefits: patient education and decreased 'repeat' asthma discharges.

All training participants will receive the Louisiana Asthma Health Care Provider Toolkit. Hospitals participating in the training will also receive color copies of F.L.A.R.E., as well as the Louisiana Asthma Management & Prevention Program (LAMP) Asthma Action Plan and the F.L.A.R.E. Patient Follow-up Referral Form. As part of the F.L.A.R.E. Training Initiative, the LAMP Program will provide additional trainings as needed for staff in hospitals planning to implement F.L.A.R.E.

#### Who Should Attend

Providers who interact with asthma patients: administrators, respiratory therapists, nurses, case managers, certified asthma educators, health educators, emergency department staff and physicians.

### **Training Location**

F.L.A.R.E. trainers from the LAMP Program will schedule free, on-site trainings for interested hospitals. The training takes one hour and can be scheduled at various times of the day to best meet the needs of hospital staff.

To request F.L.A.R.E. training, visit **www.asthma.dhh.louisiana.gov** to download a training request form and fax to Mark Perry at 225-342-5839. For any additional information, contact LAMP at 225-342-2673.



### Acknowledgements

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### www.asthma.dhh.louisiana.gov

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Health Care Provider Tool Kit, 2012-2013



Asthma Management and Prevention Program